UNTIED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

DATE: June 5, 2012

SUBJECT: Request for Removal Assistance in Evaluating Vapor Intrusion Data and Removal Authority
South Dayton Dump and Landfill Site, Moraine, Ohio

FROM: Karen Cibulskis, Remedial Project Manager
Remedial Response Branch 1, Section 2

TO: Steve Renninger, On-Scene Coordinator
Emergency Response, Cincinnati

The purpose of this memorandum is to request Removal assistance in evaluating EPA's options for addressing current and potential vapor intrusion risks at the South Dayton Dump and Landfill site, including whether Removal authority could be appropriately used to implement mitigation measures to address all or some of the current and threatened risks posed by VOCs (primarily TCE) in subslab soil gas at 12 commercial/industrial buildings built over the landfill, and at an adjacent commercial/industrial building. The sampling was conducted by the potentially responsible parties in March 2012.

TCE concentrations in one or more subslab soil gas samples at eight buildings exceed indoor air screening levels equal to a HI=1 (8.8 ug/m^3 TCE based on EPA RSLs) by over a factor of 100 to 1000 (i.e., subslab TCE concentrations greater than 880 ug/m^3 to 8,800 ug/m^3). At two of the buildings, maximum TCE concentrations in subslab soil gas were as high as 16,000 ug/m^3 and 30,000 ug/m^3. Five of these buildings are occupied by workers on a regular basis; one building is used for storage and accessed for short periods of time two to three days per week; and two buildings are vacant.

(See Table 1 and Figures. Summary tables showing all subslab and indoor air concentrations above criteria, and a complete set of all subslab and indoor air data are attached. PCE and BTEX chemicals were detected in indoor air above risk-based levels, but, based on subslab data, appear to be from current business operations, not vapor intrusion. A copy of the November 2011 Vapor Intrusion Study Work Plan is available in the Technical Documents Section of the site webpage at www.epa.gov/region5/cleanup/sodayton.)

TCE was confirmed in indoor air at three of these buildings (occupied by workers) at concentrations corresponding to a HI=1.9 to HI=7.8 (maximum TCE concentrations 17 ug/m^3 to 69 ug/m^3). TCE was detected below HI=1 concentrations at four of the buildings (i.e., detected, but at concentrations less than 8.8 ug/m^3); and was not detected at one building.

At five other buildings, subslab TCE concentrations exceeded indoor air screening levels by a factor of 10 (subslab TCE concentrations 130 ug/m^3 to 340 ug/m^3). Three of these buildings are occupied by workers on a regular basis; one building is used for storage and accessed for short periods of time two to three days per week; and one building is vacant. TCE was confirmed in indoor air at three of these buildings (occupied by workers) below HI=1 concentrations (i.e., detected, but at concentrations less than 8.8 ug/m^3), and was not detected in two of the buildings.

At one occupied building, methane was detected in a laboratory subslab soil gas sample above 10% of the LEL (sample concentration 0.97% methane by volume), but was not detected in indoor air (based on field data). At another building, used for storage, methane was detected in laboratory subslab soil gas samples above 100% of the LEL (sample concentration 6.6% methane by volume), but was not detected in indoor air (based on field data). This building is now closed to access.

We would appreciate Removal's assistance in evaluating whether the TCE and methane concentrations documented in subslab soil gas, and, in several cases confirmed within, the buildings located on and adjacent to the South Dayton Landfill, meet the criteria for "*…a release or threat of release into the environment of a hazardous substance which may present an imminent and substantial danger to public health or welfare*", including the "*actual or potential exposure to nearby human populations from hazardous substances…*" required under Removal authority. Although some of the buildings are vacant or are currently used for storage, we have been working with the building owners and the City of Moraine to evaluate cleanup alternatives that will allow for continued use of the on-Site buildings.

If the TCE concentrations documented below and within all, or some, of these buildings meet the criteria for mitigation under Removal authority, we are also wondering what the next steps would be, e.g., for Remedial to prepare a draft Action Memorandum, or would an Engineering Evaluation/Cost Analysis also be required?

Thank you so much for your time and assistance with this matter. If you have any questions or would like to set up a call to discuss this further, please contact me at 312-886-1843 or at cibulskis.karen@epa.gov.